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10/599,629

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EXAMINER

ZHENG, JACKY X

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,629	Applicant(s) TOUCHARD ET AL.	
	Examiner JACKY X. ZHENG	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on October 4, 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/4/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is an initial office action in response to communication(s) filed on June 26, 2007.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on October 4, 2006 was filed on the mailing date of the application on October 4, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

4. The disclosure is objected to because of the following informalities: on page 13, line 14, recites, "...user can view on screen 224 the sequence obtained..." with a typographic error in the label 224 in reference to Figure 7, instead it should be "... user can view on screen 214 the sequence obtained ..." according to Figure 7, "214" refers to monitor screen, and "224" refers to a single control. Appropriate correction is required.

Claim Objections

5. **Claim 1** is objected under 37 CFR §1.75(a), as the claims fail to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In detail, as evidenced by applicant's original disclosure, specifically such as in Figure 1, Step 28a, there appears to be a feature missing from claim 1 specifically in between the steps c) and d) currently

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recited in the claim, a similar step as one recited in step b) seems to be necessary to be repeated in accordance with the disclosure provide, in Step 28a of Figure 1 at least.

6. **Claims 2-11** are objected to because of the following informalities: as claims 2-11 being the dependent claims depending from the independent claim 1, each of the dependent claims should be referring to the method from claim 1, rather than a method at beginning of each dependent claims. Appropriate correction is required.

7. **Claim 9** recites the limitation "*the same iconic element*" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

8. **Claim 10** recites the limitation "*the selection of interest zone*" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

9. **Claim 11** recites the limitation "*the overall sharpness, the exposure, the centering in relation to an interest zone, the sharpness of the interest zone, the presence of human faces, and the amount of movement as against the neighboring images of the shot sequence*" in the claim. There is insufficient antecedent basis for these limitations from the previous independent claim.

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. **Claims 1-12** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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12. Claim 1 recites the limitation of “*the previously selected image sets*” in step d) of the claim. It is unclear the limitation indicated above is either referring to: the first set of images (S1); at least one new image set (S2); or both of S1 and S2. Instant issue also affects the corresponding dependent claims 2-11. Further clarification is required.

13. Claims 4-6 recite an identical limitation of “*the previously selected image set*”, also has the identical issue identified in claim 1 above. Further clarification is required.

14. Claim 2 recites the limitation of “*among the sets of selected images*” in the claim. It is unclear the limitation indicated above is either referring to: the first set of images (S1); at least one new image set (S2); or both of S1 and S2. Further clarification is required.

15. Claim 3 recites the limitation of “... respect a regular order of images of the shot sequence” in the claim. “*Regular*” is a relative term which renders the claim indefinite, and claim language does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further clarification is required.

16. Claim 4 also recites the identical limitation of “*the same regular order O*”, has an identical issue discussed in claim 3 above. Further clarification is required.

17. Claim 4 recites the limitation of “... *by choosing images respectively offset against the images of the previously selected set by a number of images less than the regular order O*” in the claim. Such a limitation has not been explicitly depicted with sufficient descriptions in the instant claim in describing how a number of images be less than an order in the claimed limitation of “...a number of images less than the regular order O”. The scope of such a

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limitation is unable to be clearly determined, which renders the claim scope indefinite. Further clarification is required.

18. Claim 5 recites the limitation of “*a common quality factor*” in the claim. The term “*common*” is relative which renders the claim indefinite, and claim language does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further clarification is required.

19. Claim 12 recites the limitation of “*the number of images*” in line 6 of instant claim. Such a limitation has not been explicitly depicted with sufficient descriptions in the instant claim, it is unclear the limitation indicated above is either referring to: the number of images in a capture mode of a single fixed image; the number of images in a capture mode of an image sequence; or the number of images of the video sequence. Further clarification is required.

Claim Rejections - 35 USC § 102

20. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

21. **Claims 1-9 and 11-12** are rejected under 35 U.S.C. 102(b) as being anticipated by Fredlund et al. (EP 1-324-587 A2).

With regard to claim 1, the claim is drawn to an automatic editing method of video sequences to produce lenticular grid hardcopies (*see Fredlund et al., i.e. Fig. 2,” Lenticular*

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Motion Card 62") based on shot sequences produced by a digital camera (see Fredlund et al., i.e. Fig. 1, "Digital Camera 12"), comprising

a) selecting the first set of images (S_1) in a shot image sequence (see Fredlund et al., i.e. paragraph [0026] discloses "...forming a lenticular motion card 62 from sequentially captured frames, selected from a sequence of frame that have previously been captured by the digital camera 12 ..."),

b) selecting each image of the image set of an individual quality factor as a function of image characteristics (see Fredlund et al., i.e. paragraphs [0025]-[0026] for selection of frames; in addition, with regard to the limitation of "an individual quality factor" as being claimed so vaguely and in turns broadly, where disclosed in Fredlund et al., a selection of frames is made it is implicit that the frames are selected based on some qualitative assessment, i.e. based on some quality factor (e.g. image OK/not OK) assigned in some way to each image or group of images; also specifically in paragraph [0026] discloses "locate the beginning of the desired sequence", "...select the desired last frame"; and paragraph [0028] discloses "... the user is assisted in determining the quality of the lenticular output by viewing a simulation that includes adjacency effects ...").

c) selecting at least one new image set (S_2) by replacing at least one image of the previously selected image set by a new image of the shot sequence, and absent from the previously selected set (see Fredlund et al., i.e. paragraph [0034], discloses that allowing the user to "reselects the start and end frames of the motion sequence"; also specifically in paragraph [0026] discloses "locate the beginning of the desired sequence", "...select the desired last frame"; and paragraph [0028] discloses "... the user is assisted in determining the quality

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of the lenticular output by viewing a simulation that includes adjacency effects ..."; also in Figure 5, Step 550), and

d) preparing image data to form a lenticular grid hardcopy (*see Fredlund et al., i.e. paragraph [0025] discloses "... to arrive at the optimum motion sequences which will be used to create the lenticular motion card 62")*), based on an image set taken from among the previously selected image sets and with the highest overall quality factor, the overall quality factor being a function of the individual quality factors of the images of each selected image set (*see Fredlund et al., i.e. paragraphs [0025]-[0028] for selection of frames; in addition, with regard to the limitation of "an individual quality factor" as being claimed so vaguely and in turns broadly, where disclosed in Fredlund et al., a selection of frames is made it is implicit that the frames are selected based on some qualitative assessment, i.e. based on some quality factor (e.g. image OK/not OK) assigned in some way to each image or group of images; and in the case of a group of images such a quality factor would in its simplest form be an accumulation or average of the individual quality factors).*

With regard to claim 2, the claim is drawn to a method according to claim 1, further comprising calculating the overall quality factor of the first selected image set, and between steps c) and d) by:

calculating the calculation a new overall quality factor of each new set of images (*see Fredlund et al., i.e. paragraph [0026] discloses "... select the desired last frame")*), and

searching the search, among the sets of selected images, for the set with the highest overall quality factor to prepare the printing data (*see Fredlund et al., i.e. paragraph [0028] discloses, determining of the quality of the lenticular output by observing, such as: frames has*

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large amount of motion, time between the start and stop frame, to create higher quality lenticular output).

With regard to claim 3, the claim is drawn to a method according to claim 1, wherein the images of the first image set respect a regular order of images of the shot sequence (*see Fredlund et al.*, i.e. paragraph [0026] discloses “... selected from a sequence of frames that have previously been captured by the digital camera 12 ...”).

With regard to claim 4, the claim is drawn to a method according to claim 3, wherein, during step c), the new image set is selected with the same regular order O as that of the previously selected set, by choosing images respectively offset against the images of the previously selected set by a number of images less than the regular order O (*see Fredlund et al.*, i.e. paragraph [0034], discloses that allowing the user to “reselects the start and end frames of the motion sequence”; also specifically in paragraph [0026] discloses “locate the beginning of the desired sequence”, “...select the desired last frame”; and paragraph [0028] discloses “... the user is assisted in determining the quality of the lenticular output by viewing a simulation that includes adjacency effects ...”; also in Figure 5, Step 550).

With regard to claim 5, the claim is drawn to a method according to claim 1, wherein step c) comprises: the selection of several new images in the shot sequence, the assignment to the new images of a common quality factor established based on the individual quality factors, the comparison of the common quality factor with the common quality factor of the images of the previously selected image set, having to be replaced by the new images, and the replacement of the images having to be replaced by the new images when the common quality factor of the new images is superior to that of the images having to be replaced (*see Fredlund et al.*, i.e. paragraph

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[0034], discloses that allowing the user to “reselects the start and end frames of the motion sequence”; also specifically in paragraph [0026] discloses “locate the beginning of the desired sequence”, “...select the desired last frame”; and paragraph [0028] discloses “... the user is assisted in determining the quality of the lenticular output by viewing a simulation that includes adjacency effects ...”; also in Figure 5, Step 550, if the user is not satisfied with the simulation, the process goes back to Step 505 and starts the selection of desired (or “superior”) first and final frame).

With regard to claim 6, the claim is drawn to a method according to claim 1, wherein step c) comprises the selection of a new image in the shot sequence, the assignment to the new image of an individual quality factor, the comparison of the individual quality factor with the individual quality factor of an image of the previously selected image set, having to be replaced by the new image, and the replacement of the image having to be replaced by the new image when the individual quality factor of the new image is superior to that of the image having to be replaced (see Fredlund et al., i.e. Figure 5, Step 550 and paragraph [0034], discloses the process of reselection if user is not satisfied with the simulation or “replacement” of the selection)

With regard to claim 7, the claim is drawn to a method according to claim 6, wherein the new image is an image immediately neighboring the image having to be replaced in the shot sequence (see Fredlund et al., i.e. Figure 5, Step 540 “Calculates Adjacency Effects”, and as well as paragraphs [0029]-[0031] for adjacency effects calculation based on the adjacent (or “neighboring”) images).

With regard to claim 8, the claim is drawn to a method according to claim 6, wherein the new image is offset from the image having to be replaced in the shot sequence by an offset rank more than or equal to one, and in which the image having to be replaced is replaced by the new image when the quality factor of the new image is superior to that of the image having to be replaced by an amount that is an increasing function of the offset rank (*see Fredlund et al., i.e. paragraph [0029] discloses "... large difference between adjacent image views occurs, for example, when the original motion is very rapid, or when the video is temporarily sampled at a low rate (i.e. many frames (or "more than one") are skipped (or "offset") between those that are saved)..."*).

With regard to claim 9, the claim is drawn to a method according to claim 1, wherein the images of the first image set are selected so as to contain the same iconic element (*see Fredlund et al., i.e. Figure 5, Step 510, then through Step 550, and then Step 510 once again*).

With regard to claim 11, the claim is drawn to a method according to claim 1, wherein the individual quality factor is fixed according to *at least one* characteristic taken from among the overall sharpness, the exposure, the centering in relation to an interest zone, the sharpness of the interest zone, the presence of human faces, and the amount of movement as against the neighboring images of the shot sequence (*see Fredlund et al., i.e. paragraph [0028] discloses "amount of motion" between the frames*).

With regard to claim 12, the claim is drawn to a camera (*see Fredlund et al., i.e. Fig. 1, "Digital Camera 12"*) comprising a selector control between a capture mode of a single fixed image and a capture mode of an image sequence (*see Fredlund et al., i.e. Fig. 1, "Mode Dial 336"; also see paragraphs [0043]-[0044]*), the camera also being equipped with a single control

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(see Fredlund et al., Fig. 6, "Mode dial 336") **operable to** automatically edit a video sequence, in response to the capture of a video sequence where the number of images exceeds the number of images capable of being contained in a lenticular grid hardcopy (see Fredlund et al., Fig. 6, "Mode dial 336"; also see paragraphs [0043]-[0044]).

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. **Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Fredlund et al. as applied to claims discussed above, and further in view of Burder (GB 2 312 349 A1, published on October 22, 1997, hereinafter as "Burder").

With regard to claim 10, the claim is drawn to a method according to claim 1, comprising, the selection of interest zones in the images and the replacement of the images by new images corresponding to the interest zones.

Fredlund et al. do not explicitly disclose the specific limitation of selection of interest zone in the images.

However, Burder discloses an invention relates to a lenticular display system has a printed image integral with a viewing screen, capable of displaying continuous animation and, or, three dimensional effects. More specifically, Burder discloses, *inter alia*, "... the use of electronic image manipulation allows for 'rotoscope' effects in order to maintain subject

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position, and size (or "interest zone"), within a sequence, thereby improving the animation effects" (see Burder, i.e. bottom of page 3 to top of page 4).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have modified Fredlund et al. to include the specific limitation of selection of interest zone in the images taught by Burder. Also, it would have been obvious to one of ordinary skill in the art at the time of invention to have modified Fredlund et al. by the teachings of Burder to incorporate the specific limitation of selection of interest zone in the images taught by Burder, thereby "*improving the animation effects*" (see Burder, i.e. top of page 4).

Conclusion

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Fredlund et al. (U.S. Pat/Pub No. 2003/0128287 A1) disclose a system and camera for creating lenticular output from digital images.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacky X. Zheng whose telephone number is (571) 270-1122. The examiner can *normally* be reached on Monday-Friday, 8:30 a.m. - 5 p.m., Alt. Friday Off.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler L. Haskins can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacky X. Zheng/

Examiner, Art Unit: 2625

April 21, 2009

/Twyler L. Haskins/

Supervisory Patent Examiner, Art Unit 2625